

Mosquito Control and West Nile Virus

What Private Drainage System Owners Should Know

What is a private drainage system?

A private drainage system is any combination of catch basins, ditches, detention ponds, pipes or other structures that act together to collect, convey and discharge storm water run-off from privately-owned property. Private drainage systems are maintained by the property owner while public drainage systems are maintained by city or county utilities department.

What is a catch basin and how are they related to mosquitoes?

Catch basins on private property are similar to storm drains that line streets to carry away rain water. They are underground vault-like structures that slow down and hold surface water before it eventually drains to a creek, lake or wastewater treatment facility. They are often identifiable by a manhole cover and sometimes by a grated cover.

Catch basins can hold standing water year round. During the spring and summer months they are an ideal place for mosquitoes to lay eggs. Catch basins are known to be major sources of *Culex pipiens*, a species of mosquito capable of transmitting West Nile virus.

How do I know if there are mosquitoes breeding in a catch basin?

The method used to detect mosquito larvae (wigglers) in catch basins and ponds is called dipping. The metal grate to the catch basin must be removed and then dipping is performed to get an idea of the mosquito abundance in the catch basin. Pest Control companies that offer mosquito control services have staff trained to identify mosquito larvae. You may also see adult mosquitoes in the catch basin area or flying in and out of the grate.



Dipping for mosquito larvae in a catch basin Mosquito "Wiggler"

How do I know if my catch basin is on private or public maintained property?

Contact your local city or county public utilities agency to learn more about maintenance of drainage structures in your area. In unincorporated King County, contact the Department of Water and Land Resources, Stormwater Services at (206) 296-1900.

What is a larvicide?

Larvicides are biological or chemical control products applied to water sources to kill the immature mosquito larvae before they develop into adults. Only adult mosquitoes are capable of transmitting diseases such as West Nile virus. It is important to READ THE LABEL before using larvicide products and to follow state and federal laws for their use. Larvicides commonly used in catch basins include *Bacillus thuringiensis israelensis* (Bti), *Bacillus sphaericus* (Bs), and methoprene.

For more information, see

www.doh.wa.gov/ehp/ts/Zoo/WNV/larvicides/Bsphaericus.html,

www.doh.wa.gov/ehp/ts/Zoo/WNV/larvicides/Bti.html, and

www.epa.gov/pesticides/health/mosquitoes/larvicides4mosquitoes.htm

Who can treat my catch basin or privately owned storm water retention pond?

Larvicides for mosquito control may only be applied to a constructed drainage system by a licensed pesticide applicator. For more information about pesticide license requirements or to find out if your pesticide applicator has the correct license to treat ponds and catch basins contact the Washington State Department of Agriculture at (877) 301-4555 or visit

<http://agr.wa.gov/pestfert/LicensingEd/Licensing.htm>

In addition, a National Pollutant Discharge Elimination System (NPDES) Permit for Aquatic Mosquito Control may be required to apply larvicides to storm ponds or catch basins. The property owner or a licensed pesticide applicator can obtain the required permit. The NPDES permit for Aquatic Mosquito Control is available from the Washington State Department of Health at no charge. For more information visit

www.doh.wa.gov/ehp/ts/Zoo/WNV/Permit.html

How else can I reduce mosquito habitat on my property?

Catch basins and storm water retention ponds are not the only mosquito larval habitat that can be found on private property. Water that accumulates in rain barrels, tires, buckets, wading pools, garden ponds, bird baths, bottles, cans, flower pot trays, tarps and plastic sheeting, as well as rain gutters should be emptied once a week to prevent mosquitoes from developing. For more information about mosquito control on private property visit the Public Health website at www.kingcounty.gov/health/westnile or call 206-205-4394.